UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202 - 2733

13 OCT 2017

FINDING OF NO SIGNIFICANT IMPACT

TO ALL INTERESTED GOVERNMENT AGENCIES AND PUBLIC GROUPS:

In accordance with the environmental review guidelines of the Council on Environmental Quality found at 40 Code of Federal Regulations (CFR) Part 1500, and with the use of the implementing environmental review procedures of the United States Environmental Protection Agency (EPA) found at 40 CFR Part 6 entitled "Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act" as guidance, the EPA has performed an environmental review of the following proposed action:

Gustavo Diaz Ordaz Wastewater Collection and Treatment Project
Proposed by the Comision de Agua Potable y Alcantarillado (COMAPA)
Located in Gustavo Diaz Ordaz, Tamaulipas, Mexico

Estimated EPA Share:	$ 2,500,000
Estimated Local Share:	$ 3,500,000

The City of Gustavo Diaz Ordaz is located in the northeast area of the Mexican state of Tamaulipas, bordering Hidalgo County in the State of Texas to the north. The municipal territory of Gustavo Diaz Ordaz, Tamaulipas, comprises 929 square miles. Currently, the area does not have adequate wastewater collection or treatment infrastructures, and residents discharge waste into an inadequate latrines or septic systems. The lack of wastewater collection and treatment infrastructure in the area creates a potential source of ground water contamination.

Comisión de Agua Potable y Alcantarillado (COMAPA) proposes to install a wastewater collection and treatment system to serve approximately 11,000 people in Gustavo Diaz Ordaz. The preferred alternative consists of making repairs to the existing north lift station and replacing the existing east lift station. Additionally, there would be 154,000 feet of new sanitary sewer lines installed, 38,000 feet of sanitary lines would be replaced, 12,000 feet of new force main, and 13,000 feet of existing sewer lines would be cleaned. A new waste water treatment plant, with a treatment capacity of 0.68 million gallons daily, would be constructed on 19.8 acres of previously disturbed land south of the city.

EPA Region 6 has performed an environmental review and assessment on the Environmental Information Document, and other supporting data, prepared for the proposed Gustavo Diaz Ordaz Wastewater Infrastructure Project. The environmental review and assessment process did not identify any potentially significant adverse environmental impacts associated with the proposed action. The project individually, cumulatively over time, or in conjunction with other actions will not have a significant adverse effect on the quality of the environment. Accordingly, the EPA Region 6 has made preliminary determination that the proposed project is not a major federal action significantly affecting the quality of the human environment, and that preparation of an Environmental Impact Statement (EIS) is not warranted.

Comments regarding this preliminary decision not to prepare an EIS and issue a Finding of No Significant Impact (FNSI) may be submitted to the U.S. Environmental Protection Agency, Special Projects Section (6EN-WS), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. All comments will be taken into consideration. No administrative action will be taken on this decision during the 30-day comment period. This preliminary decision, and the FNSI, will become final after the 30-day comment period expires if no new information is provided to alter this finding.

Responsible Official,

Cheryl T. Seager
Director
Compliance Assurance and
Enforcement Division

ENVIRONMENTAL ASSESSMENT
for the
PROPOSED GUSTAVO DIAZ ORDAZ WASTEWATER CONVEYANCE AND TREATMENT SYSTEM IMPROVEMENTS TAMAULIPAS, MEXICO

1.0 GENERAL PROJECT INFORMATION

1.1 Purpose and Need for Proposed Action

The Fiscal Year 2016 Appropriations Act for the Environmental Protection Agency (EPA) included special Congressional funding for wastewater construction projects. The Comisión de Agua Potable y Alcantarillado (COMAPA) of Gustavo Diaz Ordaz, Tamaulipas, Mexico was selected to receive appropriations funding support from the EPA for the rehabilitation of the wastewater treatment infrastructure, and construction of new treatment infrastructure in Gustavo Diaz Ordaz. Currently, the area does not have adequate wastewater collection or treatment infrastructures, and residents discharge waste into inadequate latrines and septic systems. The new wastewater treatment infrastructure would provide wastewater treatment capacity for approximately 11,000 people in Gustavo Diaz Ordaz.

The City of Gustavo Diaz Ordaz is located in the northeast area of the Mexican state of Tamaulipas, bordering Hidalgo County in the State of Texas to the north. The municipal territory of Gustavo Diaz Ordaz, Tamaulipas, comprises 929 square miles.

1.2 Proposed Action

The proposed action will consist of repairing existing infrastructure, abandoning outdated or non-functioning infrastructure, and construction of new infrastructure.

The COMAPA would install 154,000 feet of new sanitary sewer lines, 38,000 feet of sanitary lines would be replaced, 12,000 feet of new force main, and 13,000 feet of existing sewer lines would be cleaned. Additionally, the existing north lift station would be repaired and the existing east lift station would be replaced. The new lift station would be constructed adjacent to the existing lift station on a residential lot.

A new waste water treatment plant (WWTP) would be constructed on 19.8 acres of previously disturbed land south of the city. Waste water treatment would be accomplished through anaerobic, facultative, and maturation lagoons. The treated waste water would be discharged to the Esterito agricultural drain; travel 15.4 miles just north of Reynosa, and then be diverted into the Morillo Drain. The Morillo Drain discharges to the Laguna Madre in Mexico. During high flow periods the Esterito Drain would discharge to the Rio Grande.

2.0 ALTERNATIVES

2.1 Alternatives Considered by the Applicant

Three alternatives were considered for the proposed project. No other alternatives were considered feasible or practical for improving the wastewater infrastructure needs in Gustavo Diaz Ordaz.

2.1.1 Alternative 1 – No Action Alternative

Under the No Action Alternative, the COMAPA would not build wastewater collection components, a new WWTP, or lift stations. As a result, untreated wastewater would continue to leach into groundwater via leaking lines, septic tanks, and latrines. As the population of the proposed project area continues to grow, so would the volume of untreated wastewater entering the groundwater. The No Action Alternative would neglect to provide wastewater conveyance and treatment services to the residents of the project area and would fail to address the associated effects on public health.

2.1.2 Alternative 2 – Preferred Alternative

COMAPA proposes to install a wastewater collection and treatment system to serve approximately 11,000 people in Gustavo Diaz Ordaz. The preferred alternative consists of making repairs to the existing north lift station and replacing the existing east lift station. Additionally, there would be 154,000 feet of new sanitary sewer lines installed, 38,000 feet of sanitary lines would be replaced, 12,000 feet of new force main, and 13,000 feet of existing sewer lines would be cleaned. A new waste water treatment plant, with a treatment capacity of 0.68 million gallons daily, would be constructed on 19.8 acres of previously disturbed land south of the city.

2.1.3 Alternative 3 – Anaerobic Lagoon and Wetlands

Alternative 3 would have the same waste water collection components as Alternative 2, but treatment would be accomplished through an anaerobic lagoon and constructed wetland. The effluent quality from the wetland system is expected to be the same as from the facultative and maturation lagoon system, but would require approximately 22.2 acres of land.

2.2 Alternatives Considered but Eliminated from Detailed Study

Three other alternatives were initially considered for thorough analysis in the EID. These alternatives were eliminated from further consideration because they are not economically or technically feasible, or they resulted in continued discharge of improperly treated wastewater.

One alternative considered but eliminated from detailed study was the rehabilitation of the existing east lift station instead of complete replacement. Replacement of the lift station was favored due to the extent of the deterioration of the existing building, wet well, and controls. Therefore, this alternative was eliminated from additional analysis.

Rehabilitation of the existing lagoons was considered but the existing waste in the lagoons would need to be emptied in order to re-size and re-line the lagoons. This alternative was eliminated because there is not any available space to deposit the collected wastewater while the repairs are occurring.

Consideration was given to locating the future WWTP adjacent to the existing lagoons. This alternative was eliminated from analysis when it failed to achieve concurrence from the Comisión Internacional de Límites e Aguas (CILA) due to the sites location in the Rio Grande floodplain.

3.0 ENVIRONMENTAL SETTING

The City of Gustavo Diaz Ordaz is located in the northeast area of the Mexican state of Tamaulipas, bordering Hidalgo County in the State of Texas to the north. The municipal territory of Gustavo Diaz Ordaz, Tamaulipas, comprises 929 square miles and sits at an elevation ranging between 138 to 152 feet above sea level. The project area lies within the Tamaulipan ecoregion and in the deserts and xeric shrublands biome, which extends from southwestern Texas to the Sierra Madre Oriental in Coahuila, Mexico. This ecoregion is characterized by mesquite grasslands.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 Air Quality

Air quality in a given location is determined by the concentration of various pollutants in the atmosphere. The EPA establishes national ambient air quality standards (NAAQS) for criteria pollutants in the United States (US). NAAQS represent maximum levels of background pollution limits necessary to protect human health. In Mexico, the Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT) establishes normas ambientales para aire, which are Mexico's equivalent to US air quality standards. The area of concern within the US is under the jurisdiction of the Brownsville-Laredo Intrastate Air Quality Control Region, which is in attainment and is located far from all non-attainment areas for the criteria pollutants CO, lead, ozone, PM10, and SO2. There are no non-attainment areas for PM2.5 in Texas. Given that malfunctioning latrines and leaking septic systems currently treat wastewater generated in the project area, odors may be periodically emitted into the local environment. The primary emissions of concern for construction activities are CO, NO2, PM10, and PM2.5. The CO, NO2, and PM2.5 emissions are from engine combustion, and PM10 and PM2.5 emissions from fugitive dust during ground disturbing activities.

Under the No Action Alternative, no new wastewater treatment infrastructure or improvements to the existing wastewater conveyance system would be constructed in the project area, and no construction or operations related to wastewater improvements would occur. If this alternative were selected, there would be no expected direct impacts with regard to air quality.

The Preferred Alternatives dust and particulate matter emissions from construction equipment would occur intermittently during construction activities associated with improvements to the wastewater collection system. Construction activity is not expected to result in significant increases in the emissions of carbon monoxide and other primary pollutants.

The Preferred Alternative would be constructed and operated entirely within the project area in Mexico. Fugitive dust resulting from construction emissions is unlikely to result in measurable impacts to air quality in the US. Air quality impacts in Mexico from construction would be short-term and minimized through dust control and standard engineering practices.

Therefore, direct and indirect impacts in the US and Mexico during construction would be negligible.

Air quality impacts from the anaerobic lagoon and wetlands system would be similar to the preferred alternative impacts.

4.2 Noise

Noise is defined as unwanted sound or, more specifically, as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing or is otherwise annoying. Human responses to noise vary depending on the type and characteristics of the noise, the distance between the noise source and the receptor, receptor sensitivity, and time of day.

The day-night average sound level (L_{dn}) is the energy-averaged sound level measured over a 24-hour period, with a 10 dB penalty added to noise occurring between 10 p.m. and 7 a.m. The 10 dB penalty is intended to compensate for the generally lower background noise and increased annoyance associated with noise during the quieter nighttime hours. L_{dn} is the preferred noise metric of the US Department of Housing and Urban Development, US Department of Transportation, Federal Aviation Administration, USEPA, the US Department of Veterans Affairs, and US Department of Defense. The noise environment at the proposed project site in Gustavo Diaz Ordaz is characteristic of developed environments. Vehicular traffic is the primary generator of noise in the Gustavo Diaz Ordaz.

Under the No Action Alternative, no new infrastructure for wastewater treatment distribution would be implemented. No construction activity would occur under this alternative, and no changes in the existing noise environment would occur. Therefore, no direct or indirect short-term or long-term noise-generating activity or associated impacts would occur in the US or Mexico.

The Preferred Alternative comprises construction and restoration of wastewater infrastructure in the proposed project area to collect, treat, and convey generated wastewater. Implementation of the Preferred Alternative would include trenching, soil movement, and pipe installation. Noise generated by construction equipment would be temporary and would be reduced through best management practices; such as the use of equipment sound mufflers and restriction of construction activity to normal working hours. No construction would occur in the US and construction noise generated by the Preferred Alternative would be short-term in nature. No direct or indirect construction noise impacts are anticipated to occur in the US.

Noise generated from the anaerobic lagoon and wetlands system would be similar to the preferred alternative impacts.

4.3 Floodplains

Under the Proposed Action and the anaerobic lagoon and wetlands system, COMAPA would construct infrastructure to accommodate wastewater flows, as well as rehabilitate existing infrastructure in the proposed project area. The proposed project area is entirely within Mexico, and no construction would occur within the US. Construction would be limited to installation of collection and conveyance networks and support infrastructure along existing roadways and previously disturbed areas within Mexico. No construction activity would occur in the US; therefore, no direct or indirect impacts to floodplains in the US would occur under implementation of the Preferred Alternative. No portions of the proposed project are within an identified floodplain; therefore, no impacts to floodplains would occur in Mexico.

If the No Action Alternative were selected, no construction or long-term operation of a wastewater collection system would occur in the proposed project area. No activities would result in direct or indirect impacts on floodplains.

4.4 Wetlands

No natural wetlands exist in or near the proposed project area. Under the Preferred Alternative and the anaerobic lagoon and wetlands system alternative, no construction would occur in the US. Construction activities would be limited to previously developed or disturbed areas. Since no wetlands are near the proposed project area; no direct or indirect effects on wetlands in the US or Mexico would occur under implementation of the Preferred Alternative.

Under the No Action Alternative, no new infrastructure for wastewater collection would be constructed or improved. Therefore, no impacts would occur under the No Action Alternative.

4.5 Ground Water Resources

The Gulf Coast aquifer is the largest aquifer in the southeastern part of Texas; including the lower Rio Grande Valley on the border with Mexico. It is the main source of ground water for this region. According to geotechnical investigations at five test sites, groundwater depths in the area range from 4.9 to 7.2 feet. During construction of the lift station and the wastewater collectors' shallow groundwater would be pumped to agricultural drains, if necessary. The groundwater discharge to the drains would not be expected to adversely affect water quality for either of the action alternatives.

Under the No Action Alternative, no new wastewater treatment infrastructure or improvements to the existing wastewater conveyance system would be constructed in the project area, and no construction or operations related to wastewater improvements would occur. Since wastewater generated in the project area would continue to receive inadequate treatment and would continue to be discharged to the subsurface, potential impacts on groundwater quality would continue and could be considered adverse.

In administering the sole source aquifer program (SSA) under Section 1424 of the Safe Drinking Water Act, EPA performs evaluations of projects utilizing federal dollars for potential impacts to designated SSA's. The project does not lie within the boundaries of a designated SSA, and therefore, does not require review under the SSA program.

4.6 Surface Water Resources

The Rio Grande is the main source of surface water in Hidalgo County, as well as for the City of Gustavo Diaz Ordaz. The Rio Grande originates in the San Juan Mountains of southern Colorado and terminates into the Gulf of Mexico. The SEMARNAT sets surface water quality regulations for the final discharge of wastewater to all water receptors nationwide. This water quality regulation is listed in Mexico Norm NOM-001-SEMARNAT-1996, which establishes the maximum permitted levels of contaminants in wastewater that can be discharged into water bodies or properties in Mexico.

During normal operation of the Estirito and Morillo drains, the wastewater effluent would flow from the Esterito drain to the Morillo, and on to the Laguna Madre. During periods of high flow in the Estirito Drain, the Drain empties in to the Rio Grande. The effects of the treated effluent discharge were modeled to predict if the new treated discharge would affect the water quality in the Rio Grande. Modeled conditions showed a slight dissolved oxygen (DO) sag, but still maintained DO conditions of 6.97 mg/L; which are well above the requirement of 5mg/L for average conditions. Modeled bacteria concentrations are not expected to exceed contact recreation standards for either of the action alternatives.

Section 10 of the Rivers and Harbors Act of 1899 tasks the U.S. Army Corps of Engineers (USACE) with overseeing any action that may affect navigable waters of the United States. The action alternatives are entirely within Mexico and would cause no impacts to navigable waters. The National Park Service (NPS) administers the National Wild and Scenic River Program. There are no sections of the Rio Grande designated as Wild and Scenic River that will be impacted by the project. The International Boundary and Water Commission (IBWC) assess impacts to the shared water resources of Mexico and the United States. The funding recipient is responsible for continued coordination with IBWC, and must adhere to any water quality requirements, permitting processes, or recommendations put forth by the agency for the duration of the project.

4.7 Biological Resources

In Mexico, the SEMARNAT administers laws affecting the environment, including threatened and endangered species (T&E). Norm NOM-059-ECOL-2001 identifies four categories for status classification: endangered species, threatened species, special protection species, and species possibly extinct from wildlife communities. Comparable to the USFWS, the SEMARNAT prohibits the taking, possession, transportation, or sale of any of the plant or animal species designated by law as T&E without the issuance of a permit.

The project area is typical of residential areas and has undergone extensive development resulting in a highly modified environment; therefore, this area does not provide suitable habitat for sensitive plants or wildlife. Remaining vegetation and wildlife in, and near, the project area is typical of species encountered in urban environments.

Under the Preferred Alternative and the anaerobic lagoon and wetlands system alternative, no construction would occur within the US. There would be no direct impacts to habitat within the US. Long-term adverse impacts to aquatic habitat are not anticipated to occur.

Construction activities in Mexico under the both action alternatives would be short term and limited to existing roadways and previously disturbed areas. No direct or indirect impacts to biological resources in Mexico would result, and implementation of the action alternatives would result in negligible impacts.

Under the No Action Alternative, no new wastewater treatment infrastructure or improvements to the existing wastewater conveyance system would be constructed in the project area, and no construction or operations related to wastewater improvements would occur. No direct or indirect short-term or long-term impacts would occur.

4.8 Cultural Resources

Construction activities under both action alternatives would be temporary and would be limited to previously disturbed and developed areas or existing roadways. Therefore, no impacts to cultural resources in Mexico are anticipated under implementation of the Preferred Alternative. Construction activities that require subsurface excavation would include the stipulation that if any subsurface cultural materials are identified, work should cease and the appropriate personnel from the Instituto Nacional de Antropología e Historia (INAH) to determine the appropriate course of action.

Impacts to cultural resources in the U.S. are not anticipated because all of the construction activities associated with the implementation of this alternative would occur only in Mexico. No impacts would be expected to occur to cultural resources with the implementation of the preferred Action Alternative.

Construction activities associated with the proposed action would not occur with implementation of the No Action Alternative. As a result, cultural resources in the area of concern would not be impacted.

4.9 Environmental Justice and Protection of Children

Both action alternatives would result in positive impacts for children, minority populations, and low income populations within the project area. Expansion of the current wastewater collection system would reduce the likelihood of groundwater contamination. No adverse impacts to children, minority populations, or low income populations would occur under implementation of the Preferred Alternative.

Construction of the Preferred Alternative would be entirely within Mexico. No short-term or long-term impacts are anticipated to occur within the US; therefore, children and minority and low income populations within the US would not experience direct or indirect disproportionate impacts related to the Preferred Alternative.

Under the No Action Alternative, no new wastewater treatment infrastructure or improvements to the existing wastewater conveyance system would be constructed in the project area, and no construction or operations related to wastewater improvements would occur. Implementation of this alternative could be considered adverse with respect to public health and these protected populations because it would not address issues associated with potential contamination of groundwater sources.

4.10 Cumulative Impacts

The No-Action Alternative would not contribute to a general improvement in municipal and sanitation services compared to what is currently taking place in the area of concern and also downstream throughout the Rio Grande and its associated habitat.

The cumulative effects of the action alternatives would increase the quality of municipal services and provide positive transboundary impacts. This would occur due to improved water quality conditions in combination with other wastewater treatment infrastructure projects along the U.S/Mexico border. Upgrades to the wastewater collection infrastructure would reduce the contamination of potable water from leaky septic systems and latrines. The proposed enhancements will indirectly improve the water quality in the Rio Grande even as the contiguous population and the amount of wastewater discharged continues to grow. The implementation of the action alternatives will increase water quality within the region.

4.11 Unavoidable Adverse Impacts

Implementation of either action alternative would result in temporary, adverse impacts such as fugitive dust emissions, vehicle emissions, noise, traffic disruption, and soil disturbance. Unavoidable adverse impacts associated with the no-action alternative include discharge of untreated wastewater into the environment, and the risk of contamination of groundwater.

4.12 Relationship Between Short-term Uses and Long-term Productivity

In the short term, implementation of the action alternatives would result in temporary, adverse impacts such as fugitive dust emissions, vehicle emissions, noise, traffic disruption, and soil erosion. Long-term effects of the action alternatives include efficient wastewater collection and conveyance, resulting in protection of water resources, improved public health, quality of life, and socioeconomic benefits. The no action alternative would result in adverse impacts on both short and long-term productivity from continued poor water quality and public health. These impacts would be exacerbated by population growth in the project area.

4.13 Irreversible and Irretrievable Commitment of Resources

If the Preferred Alternative is implemented, irreversible and irretrievable resources committed to the project include energy used to construct the WWTP and pipeline, depreciation in value of the equipment used in construction, monies expended toward workforce expenses during construction, and loss of land and soil resources within the footprint of the WWTP.

5.0 PUBLIC PARTICIPATION

The projects technical and financial information was available to the public for review by holding a public meeting in Gustavo Diaz Ordaz on August 31, 2015. The public meeting was announced in a local newspaper. During the meeting a presentation of the project was made to the community.

During the process of conducting the environmental review and preparing this Environmental Assessment for the project, coordination has been conducted with all required resource protection agencies and offices to solicit and incorporate their initial review and

comments. Copies of this Environmental Assessment will be provided to those agencies and offices for their final review and comments. Other interested parties may request a copy of the Environmental Assessment by contacting Keith Hayden, via telephone at (214) 665-2133, electronically at hayden.keith@epa.gov, or in writing from the EPA, Special Projects Section (6EN-WS), 1445 Ross Avenue, Dallas, Texas 75202-2733.

6.0 RECOMMENDATION

Based upon completion of this Environmental Assessment, and a detailed review of the Environmental Information Document for the project, it has been determined that construction activities are considered to be environmentally sound. Therefore, it is recommended a Finding of No Significant Impact be issued.

7.0 LIST OF AGENCIES CONTACTED BY BECC

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
U.S. National Park Service
Federal Emergency Management Agency
International Boundary and Water Commission
Natural Resource Conservation Service
North American Development Bank
Texas Commission on Environmental Quality
Texas Parks and Wildlife Department
Texas State Soil and Water Conservation Board
Texas Historical Commission
Comisión Internacional de Limites y Aguas
Instituto Nacional de Antropología e Historia